

Banisteria, Number 40, pages 78-80
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CALLIGRAPHA PNIRSA STÅL, A RARELY COLLECTED LEAF BEETLE NEW TO THE VIRGINIA FAUNA (COLEOPTERA: CHRYSOMELIDAE). — Leaf beetles comprise a large family (Chrysomelidae) of about 1,700 species in North America (Riley et al., 2002). Staines & Staines (2009) recorded 555 species and seven subspecies in 133 genera in the Mid-Atlantic region (defined as the seven states from NJ to NC, west to WV; also DC). Their summary revealed that the Virginia fauna includes 382 species (and four subspecies) in 110 genera, ranking the state's diversity above the totals for Delaware, New Jersey, Pennsylvania, West Virginia, and the District of Columbia, but below those for Maryland (404 species and three subspecies) and North Carolina (391 species and six subspecies). Although some leaf beetles are of considerable economic importance, the biology, host plants, and immature stages of most species are unknown (Staines & Staines, 2009).

Twenty-one species of *Calligrapha*, a genus which contains many intricately-marked or "showy" beetles (some with metallic coloration), have been recorded from the Mid-Atlantic region (Gómez-Zurita (2005; Staines & Staines, 2009), accounting for more than half of the 37 species known from North America north of Mexico (Riley et al., 2002). Ten species were listed for Virginia by Staines & Staines (2009), but Gómez-Zurita (2005) reported that *C. confluens* Schaeffer is also known from the state, citing Brown (1945).

Within the Mid-Atlantic region, *C. pnirsa* Stål, a rarely collected species, has been recorded only from North Carolina and Pennsylvania (Staines & Staines, 2009). Wray (1967) cited a specimen collected by O. L. Cartwright on 6 June 1939 at Sunburst (Haywood Co.) in western North Carolina. Historically, this species was reported only from Ontario, Quebec, Minnesota, Indiana, and North Carolina in North America (Brown, 1945; Wilcox, 1972), but the holotype purportedly was collected in Costa Rica (see Stål, 1862; Jacoby, 1880-1892). Blackwelder (1946) listed the species with uncertainty for both Costa Rica and the United States. Recent reports and surveys have added Ohio (Clark, 2000), Kentucky (Barney et al., 2008), and Great Smoky Mountains National Park (Carlton, 2012) to its known distribution in the United States. *Calligrapha pnirsa* was not mentioned in summaries of the state chrysomelid faunas for Alabama (Balsbaugh & Hays, 1972), Florida (Peck & Thomas, 1998, 2012), South Carolina (Ciegler, 2007) or West Virginia (Clark,

2000), and Gómez-Zurita (2005) did not encounter any new state records of this species from anywhere within its range during his recent examination of more than 2,000 specimens (mostly from the USNM collection) of this genus.

Despite the lack of published records for Virginia, a specimen of *C. pnirsa* was collected by RLH more than 30 years ago in the far southwestern portion of the state: *Washington County*: Abrams Falls near Bristol, 6 June 1979, R. L. Hoffman & R. E. Batie, RU 9031. **NEW STATE RECORD.**

The specimen readily keys out to *C. pnirsa* using Wilcox (1972) and remains the only known example of this species from Virginia. It is orange with extensive black markings and exhibits a pattern (Fig. 1) that closely resembles Figure 69 of Wilcox (1972: 30), and is similar to the pattern illustrated (presumably of the holotype) in color plate 11, figure 18 in Jacoby (1888-1892).

We visited the Abrams Falls site on 24 August 2011 in an effort to obtain additional material but did not observe *C. pnirsa* on that date. RLH also visited the site on several other occasions after the species was found there, but never saw another specimen. With this new record, the *Calligrapha* fauna of Virginia is increased to a dozen species, more than twice the figure ($n = 5$) used by Gómez-Zurita (2005: 97) in his map of state/province and latitudinal diversity within this genus.

Many species of *Calligrapha* feed on plants of little economic importance, or if their food plants are of some economic importance, they only rarely reach pest status (Brown, 1945; Wheeler & Hoebeke, 1979). Ainslie (1925) reported that *C. pnirsa* is associated with basswood (*Tilia americana* L.), a tree that is also fed upon by several more northern congeners (e.g., *C. amator* Brown, *C. tiliae* Brown, and *C. virginea* Brown; Brown, 1945; Wilcox, 1972). Future sampling in Virginia forests containing basswood may yield additional records of *C. pnirsa*. Within the state, this tree is typically found in rich cove forests, or areas containing mafic or calcareous soils (primarily in the mountains), or in marl ravines associated with fossil shell deposits in the Coastal Plain (Virginia Botanical Associates, 2012).

ACKNOWLEDGEMENTS

Karen Francl provided SMR access to the insect collection at Radford University (RU). Bill Tindall and Susan Fiene facilitated our 2011 visit to Abrams Falls. Al Wheeler and several anonymous reviewers provided helpful comments that improved the manuscript.



Fig. 1. *Calligrapha pnirsa* specimen (Radford University 9031) from Abrams Falls, Washington County, Virginia. Top: Dorsolateral view. Middle: Laterodorsal view. Lower left: Dorsoanterior view. Lower right: Dorsoposterior view.

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Authors at Abrams Falls, Washington Co., VA, 24 August 2011, photo by Bill Tindall.